OPERATIONAL RISK MANAGEMENT

CPO / LPO ORM Brief

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SIGNIFICANT LOSSES OVER THE PAST 5 YEARS

⮡ 3.6 billion dollars spent for mishaps on average. With the money we could build
4 DDGs or 3 LHDs.

⮡ 971 deaths due to mishaps. Enough people for the crews of the ships built with the 3.6 billion dollars.

*More than 90% of all*

How Sailors and Marines Died (FY 97 - FY 01)
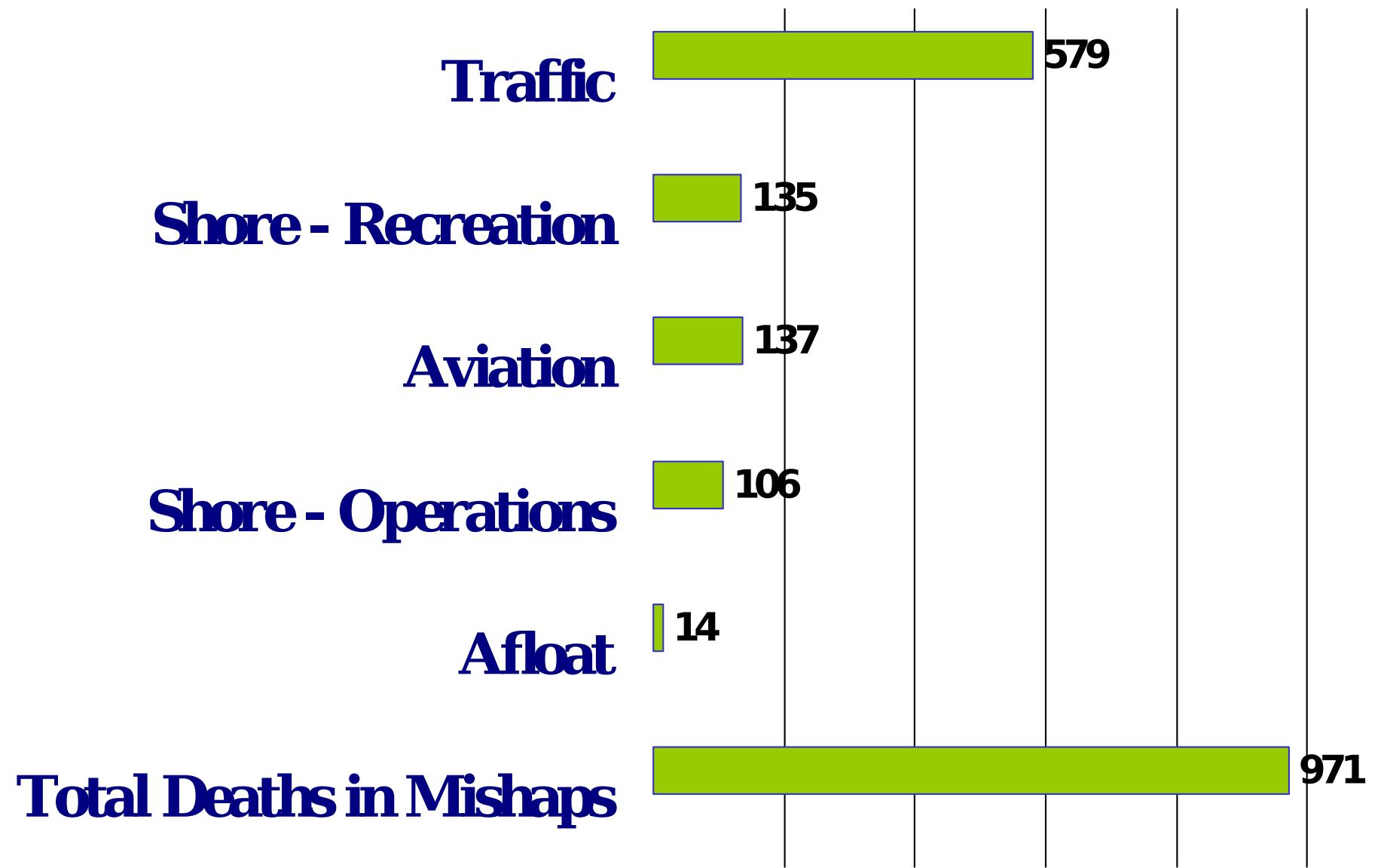
Category	Deaths
Traffic	579
Shore - Recreation	135
Aviation	137
Shore - Operations	106
Afloat	14
Total Deaths in Mishaps	971

FY 02 to date (Class A Mishaps)

- **NIMITZ**   **14 Oct - Equipment Loss**

- **INCHON**   **19 Oct - Death/Class B Fire**

- **PETERSON**   **18 Nov - Security Team/Two Deaths**

- **RUSSELL**   **27 Nov - MOB/Death**

- **KITTY HAWK**   **29 Nov - Death**

- **BUFFALO**   **5 Jan - Equipment Damage**

- **OAK HILL**   **16 Jan - FOD damage to LCAC**

5 December 00
USS Taylor
Lost Towed Array

STORM DAMAGE

⬡ = HAWSPIPE COVERS (2)

▲ = SPEAKERS (3)

▯ = ELECTRICAL CONDUITS (4)
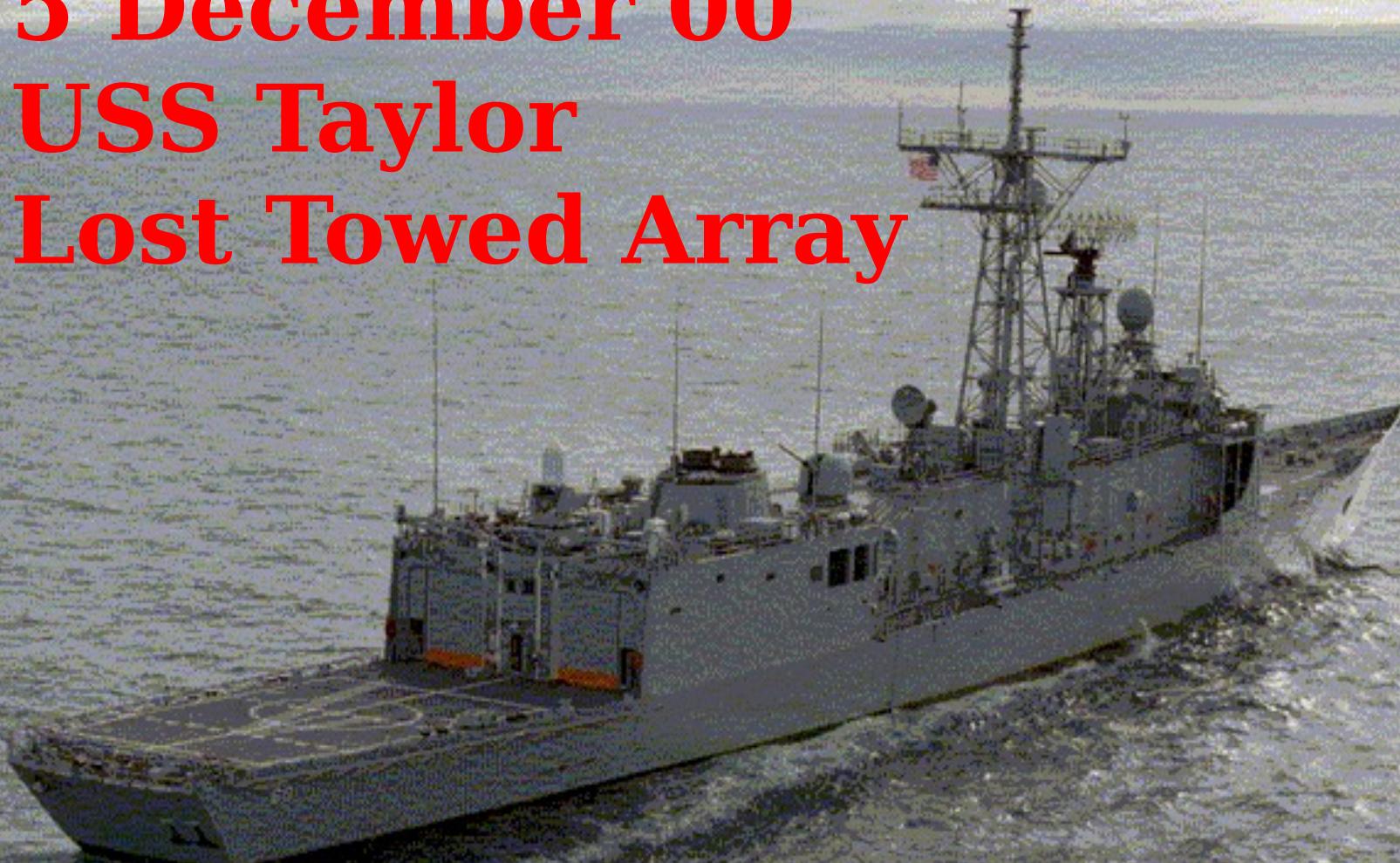
25 January 01 USS Vella Gulf Strut Bearing Damage

5"/54

VLS Launcher

LIFE LINES

BITS

CLOSED CHOCK

STANTIONS

ESCAPE TRUNK

PORT BREAK

FAKED STORM LINE

DAMAGED FIXED STANTIONS

STBD BREAK
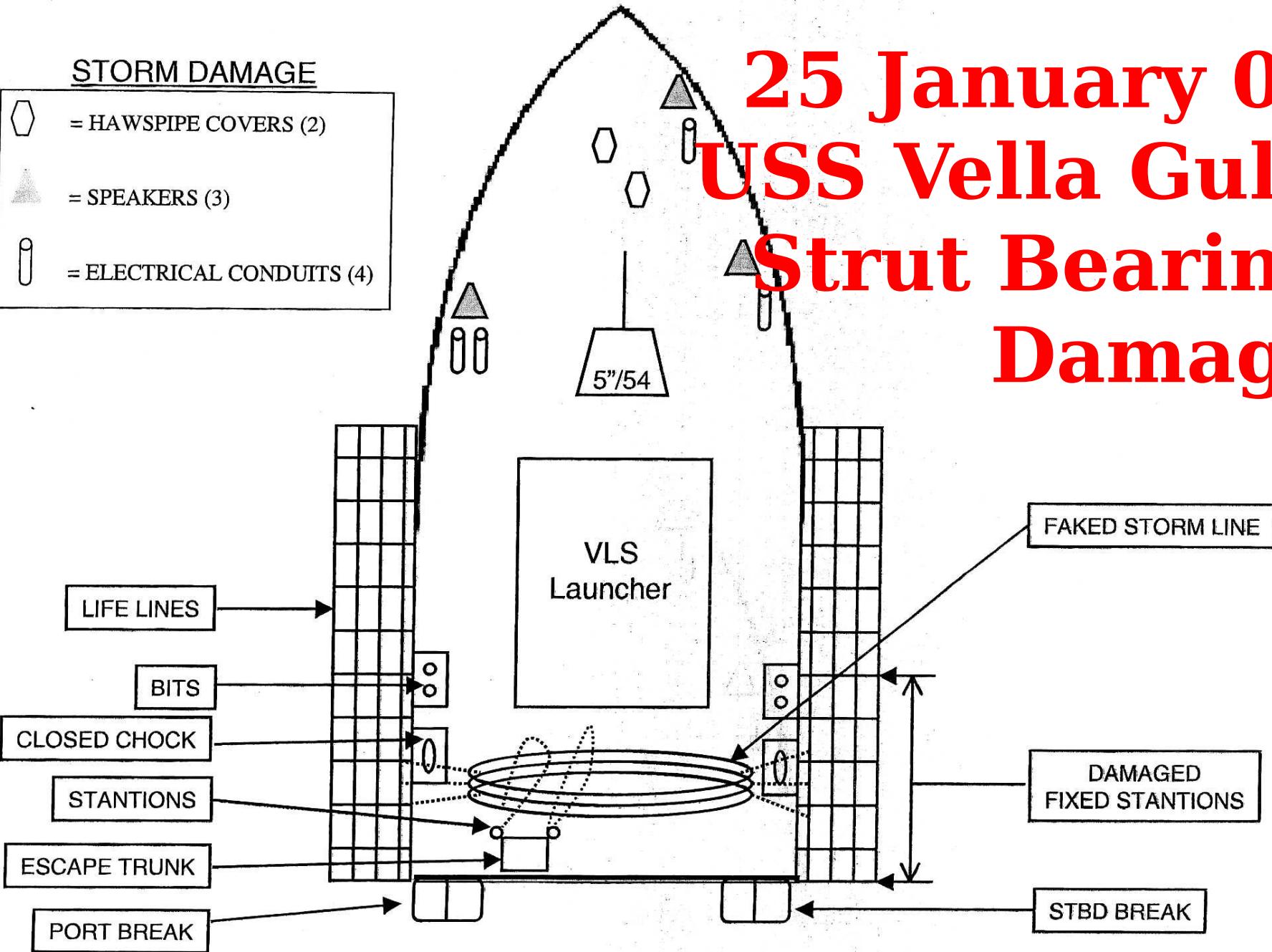
9 February 2001 USS Greeneville Collision

28 March 2001
USS Portland
Death

28 March 2001
USS Portland
Death

5 May 2001
USS Safeguar[d]
Death

GSK

2 AMR   2 MER
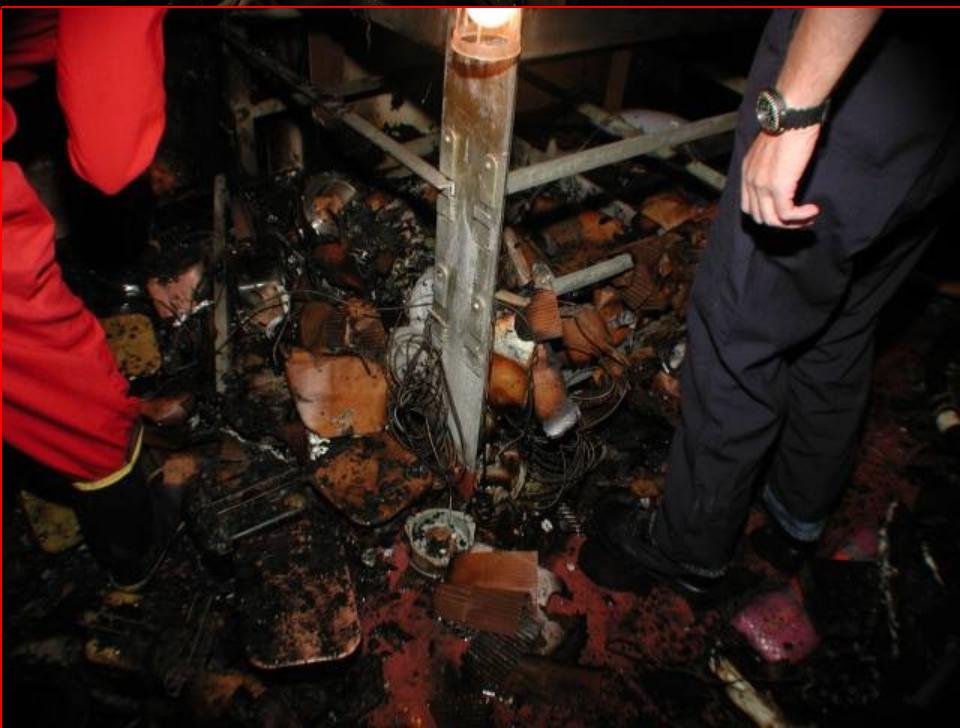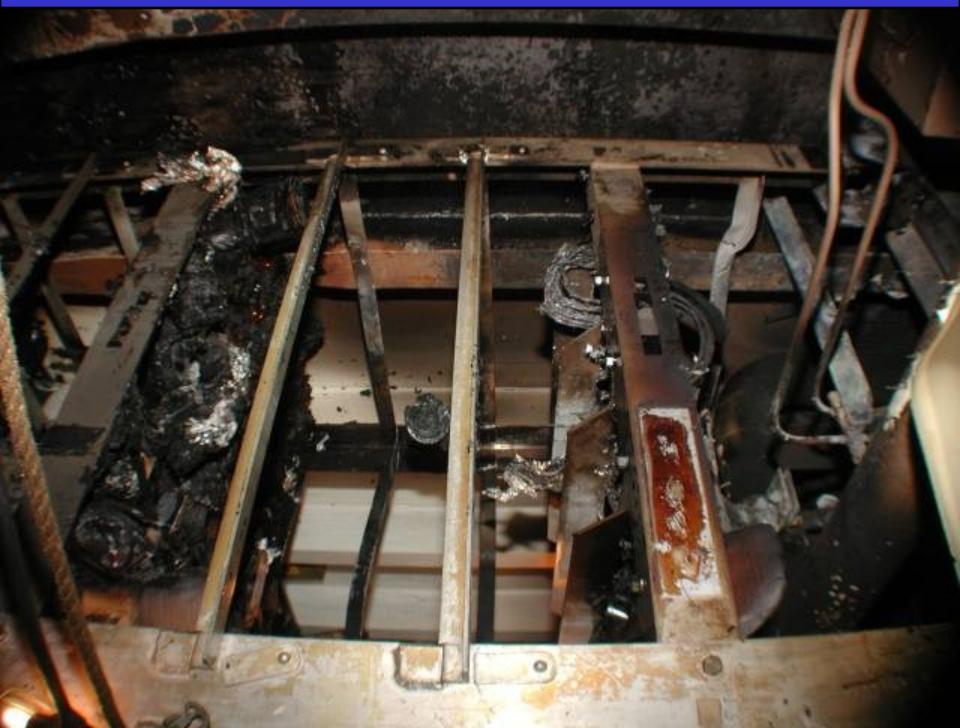
4 July 2001
# USS Constellation
MRG/Shaft Damage
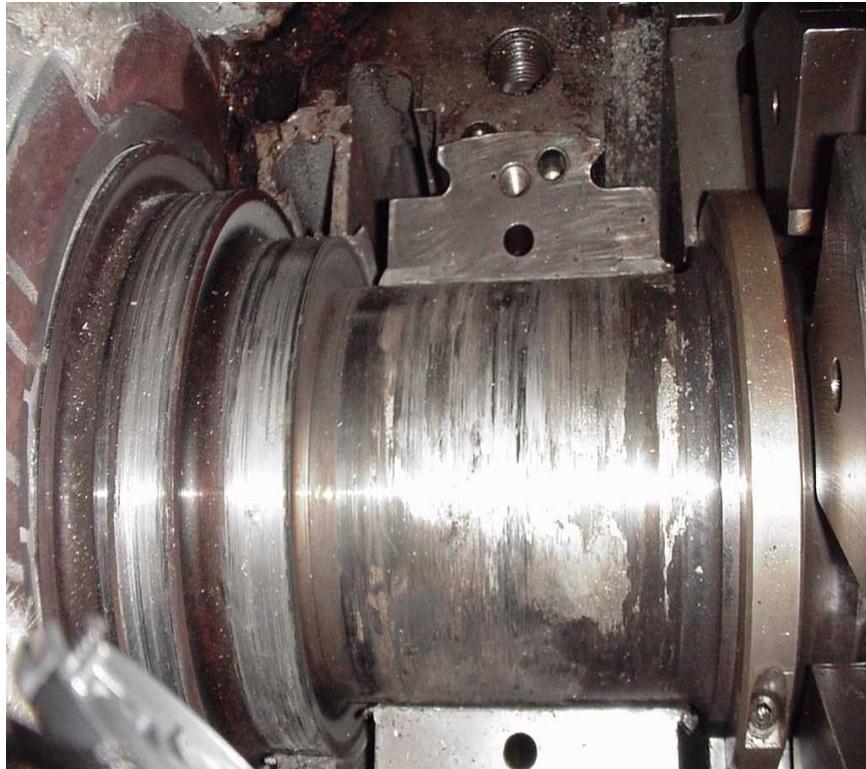
6 July 2001
USS Carter Hall
Death

19 October 2001
USS Inchon
Death/"B" Fire

FY 02 to date (Class A Mishaps)

- **NIMITZ**   **14 Oct -** **Equipment Loss**

- **INCHON**   **19 Oct -** **Death/Class B Fire**

- **PETERSON**   **18 Nov -** **Security Team/Two Deaths**

- **RUSSELL**   **27 Nov - MOB/Death**

- **KITTY HAWK**   **29 Nov -** **Death**

- **BUFFALO**   **5 Jan - Equipment Damage**

- **OAK HILL**   **16 Jan -** **FOD damage to LCAC**
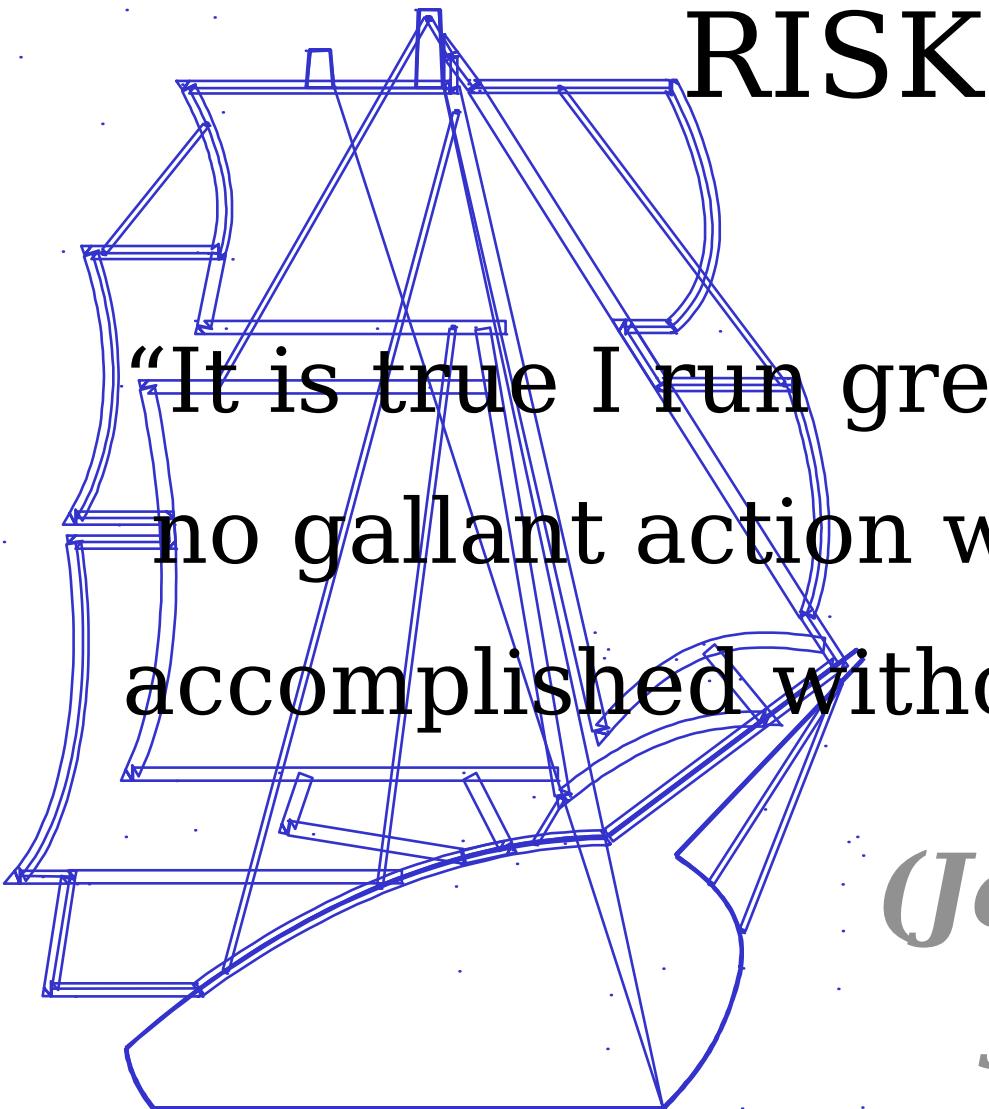
RISK

"It is true I run great risk; no gallant action was ever accomplished without danger."

(John Paul Jones)

Operational Risk Management

Provided:

Electronic version of every brief

Training

- Causes of Risk
- Benefits of ORM
- 3-Levels of ORM
- 4-Principles of ORM
- 5-Step ORM Process

Causes of Risk

- **Resource constraints**
- **New technology**
- **Complex evolutions**
- **Feeling of "Invincibility"**
- **Environmental influences**
- **Human nature**

Operational Risk Management VS Non-Standard Approach

Definite approach   **Random, hit or miss**

Proactive   **Reactive**

Integrates all types   **Safety as after-thought
of risk into plan; "What if?"**   **once plan is done**

Common   **Changing Method
process/terms**

Conscious decision   **"Can do"**

The Benefits of Risk Management

�Reduction in Injuries and Fatalities

➤ **Reduction in Material and Property Damage**

➤ **Effective Mission Accomplishment**
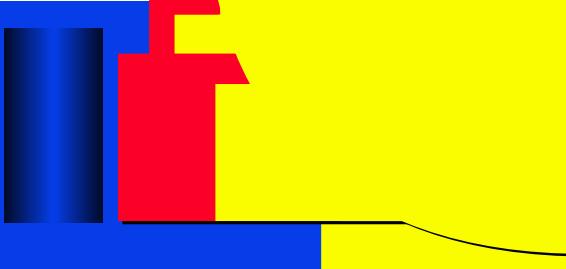
3 - Levels

- Time-critical – On the run consideration of the process

- Deliberate – Application of the complete process

- In-depth – Complete process with detailed analysis

4 - Principles

- Accept risk when benefits outweigh the cost.

- Accept no unnecessary risk.

- Anticipate and manage risk by planning.

- Make risk decisions at the right level.

Scenario:

Ship's force needs to transfer stores utilizing the ship's vertical-package conveyor. Sea state is moderate, and a total of 30 boxes weighing 15 lbs each need to be moved.

Hazard:

A condition with the potential to cause personal injury or death,
property damage, or mission

Operationa

Risk

Manageme

Identify Hazards

1

Pick out *manageable pieces* **of the event.**

Use *experience* **as a guide.**

"**Experience is the name everyone gives to their mistakes." (Oscar Wilde, 1892)**

Ask "*What if?" Or better yet, "What can go wrong?"*

Use *Brainstorming (everyones input important)*

Think *Cause and Effect.*

Identify Hazards

HAZARDS

Moving machinery

Back strain

Slip/Fall

Loss of communications

Damaged stores

Fatigue

Operational Risk Management

2

Assess Hazards

Prioritize the risks of identified hazards based on:

- *Probability* of possible loss

- *Severity* of possible loss

Risk:

An expression of possible loss
in
terms of **severity** and

The likelihood that a hazard will result in a mishap.
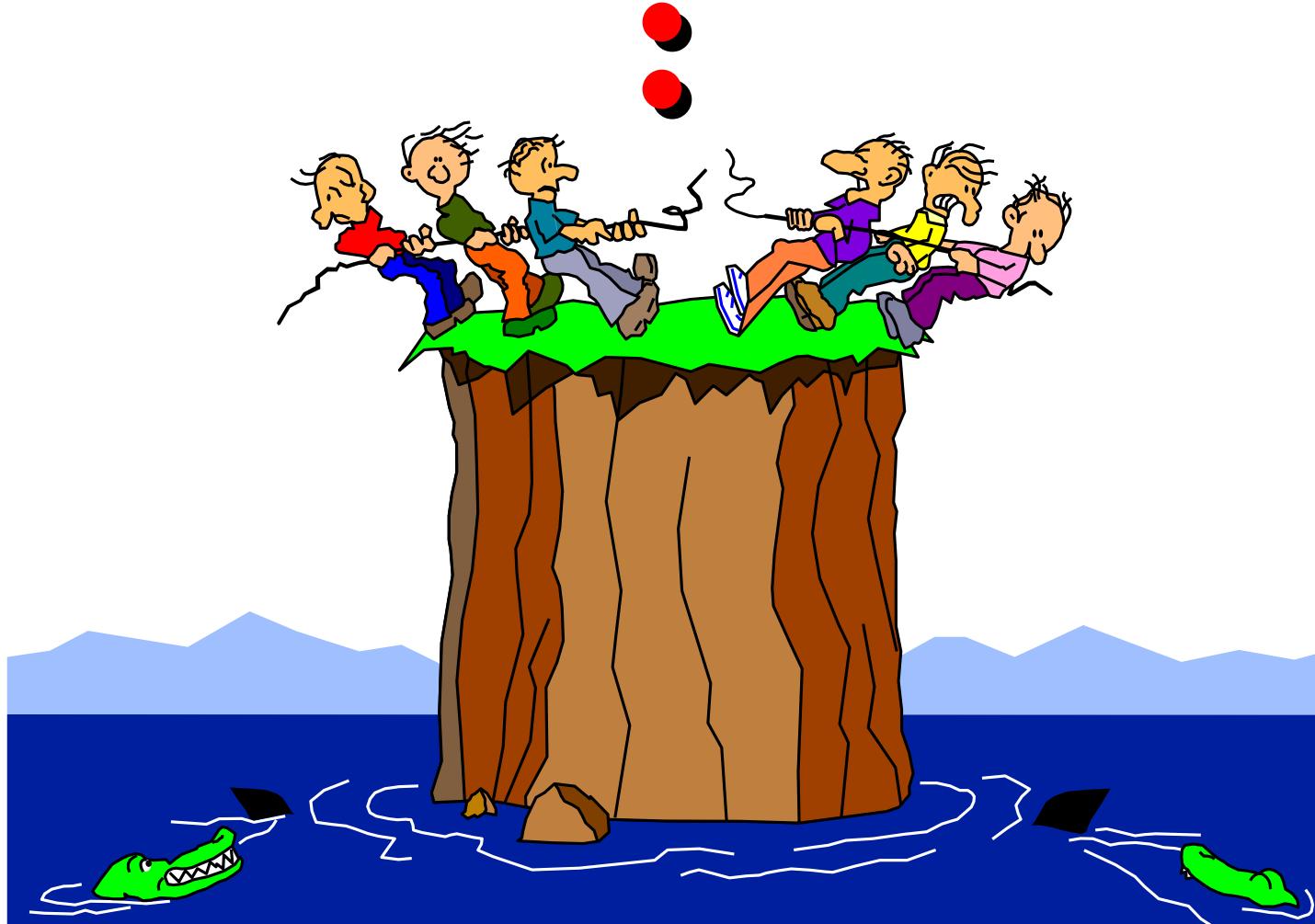
The worst consequence which can occur as a result of a hazard

Risk Assessment Code - (RAC)

1 = Critical
2 = Serious
3 = Moderate
4 = Minor
5 = Negligible

CAT I = Death, Loss of asset.

CAT II = Severe, injury / degradation of asset.

CAT III= Minor, injury degradation of asset.

CAT IV= Minimal, injury degradation of asset.

SEVERITY	Probability of Occurrence			
	Likely - Immediate	Probably will occur in time	May occur	Unlikely to occur
	A	B	C	D
Cat I	1	1	2	3
Cat II	1	2	3	4
Cat III	2	3	4	5
Cat IV	3	4	5	5

Risk Levels
Risk Assessment Code

Assess Hazards

HAZARDS	P/S	RAC
Moving machinery	A/I	1
Back strain	C/II	3
Slip/Fall	C/III	4
Loss of communication	C/IV	5
Damaged stores	C/IV	5

3

Make Risk Decisions

A. **Prioritize risks**...which hazard should we be concerned with first.

B. **Brainstorm**...List all items that will help mitigate hazard.

C. **Decide**

Make Risk Decisions

HAZARDS	P/S	RAC
Moving machinery	1	A/I
Back strain	3	C/II
Slip/Fall	4	C/III
Fatigue	4	C/III
Damaged stores	5	C/IV

Make Risk Decisions

Hazards

Discussion/Options

1 - Moving machinery

3 - Back strain

4 - Slip/Fall

4 - Fatigue

5 - Damaged stores

5 - Loss of comms

Make Risk Decisions

Hazards   **Discussion/Options**

1-Moving machinery -Qualified operators, Two-man rule, Warning

observer, No

signs and placards, Safety

loose clothing etc...

3-Back strain - Proper lifting techniques

4-Slipping/Fall - Non-skid in front of loading station, skid tread

4-Fatigue - Ensure personnel have

had proper rest

5-Damaged stores - Load/unload boxes

Make Risk Decisions

Decide

Are we going to do the job or task or do we need to re-think it?

SAFETY 1

# 4 Implement Controls

- Engineering controls

- Administrative controls

- Personal protective equipment

Control

: **A method for reducing risk by lowering the probability of occurrence, decreasing potential severity, or both.**

DANGER

CAUTION : DO NOT CROSS
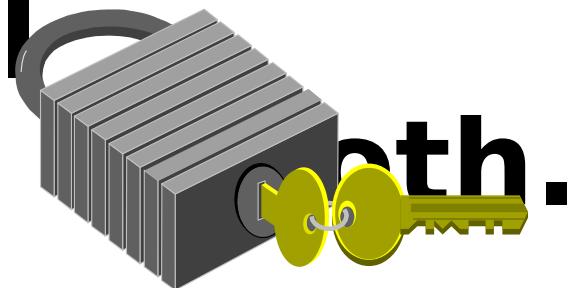
Implement Controls

(1) Engineering Controls

   - Changing design or material.

(2) Administrative Controls

   - Warnings, markings, placards, signs and
   - Written policies.
   - Training.

(3) Personal Protective Equipm

Implement Controls

(1) Engineering Controls

Electrical and Mechanical Interlocks,
Plexiglass shield, Emergency stop butto

(2) Administrative Controls

PMS on equipment, Instruction placards
PQS for operators, Technical manuals, e

(3) Personal Protective Equipm

Tucked-in clothing, Steel-toe boots, etc.

Operational
Risk
Management

5 Supervise

Ensure that controls are actually working and are they doing what we intended them to do.

Watch for changes and adjust as necessary. CHANGE WILL PRESENT NEW HAZARDS!

Operational Risk Management

A Decision Making Tool to:

✓ **Increase our ability to make informed choices**

✓ **Reduce our risks to an acceptable level**

ORM is a process...
not a program!

It must become an inherent way of doing business

Three Crucial Question

* **What can go wrong?**
* **What can I do about it?**
* **If I can't do anything, who do I te**

"Risk Management is no acciden